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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/601,748

06/23/2003

Naoki Nishimura

B422-233

8979

26272

7590

11/28/2005

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EXAMINER

YACOB, SISAY

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. **10/601,748**

Applicant(s)

NISHIMURA ET AL.

Examiner

Sisay Yacob

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

1 The application of Nishimura et al., "Wireless communication apparatus and method" filed on June 23, 2003 has been examined.

Claims 1-13 are pending.

### ***Claim Rejections - 35 USC § 102***

2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3 Claims 1, 2, 5, 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent of Johnson et al., (6,373,399).

4 As to claim 1, Johnson et al., discloses a wireless communication apparatus comprising a plurality of fine functional elements each having communication means for data transmission and reception by using radio waves or light (Col. 3, lines 42-60; Col. 5, lines 42-52; Col. 7, lines 11-20; Col. 22, lines 19-21; Items 316 and 318 of figure 2), one or more means other than the

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communication means (Items 314, 315, 320, 322 and 324 of figure 2), and a base station for controlling and collectively managing said fine functional elements through communications with said fine functional elements (Col. 5, lines 42-52; Item 120 of figure 1), wherein one or more means other than the communication means are activated through communications of one of said fine functional elements received control information from said base station with another of said fine functional elements via the communication means (Col. 19, lines 51-63).

5       As to claim 2, a wireless communication apparatus according to claim 1, further, Johnson et al., discloses each of said fine functional elements utilizes, as an energy source for activating one or more means other than the communication means, power generating means possessed by the fine functional element or energy of radio waves or light sent from said base station (Items 310 and 312 of figure 2).

6       As to claim 5, a wireless communication apparatus according to claim 1, wherein said base station transmits the control information to one of said fine functional elements which activates one or more means other than the communication means in accordance with the control information (Col. 19, lines 51-63), transmits information obtained by one or more means other than the communication means to said base station (Col. 8, lines 29-67), and said base station processes the transmitted information (Col. 3, lines 48-60).

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7 As to claim 7, Johnson et al., disclose a wireless communication method for a wireless communication apparatus (See figure 1), the apparatus comprising a plurality of fine functional elements each having communication means for data transmission and reception by using radio waves or light (Col. 3, lines 42-60; Col. 5, lines 42-52; Col. 7, lines 11-20; Col. 22, lines 19-21; Items 316 and 318 of figure 2), one or more means other than the communication means (Items 314, 315, 320, 322 and 324 of figure 2), a base station for controlling and collectively managing said fine functional elements through communications with said fine functional elements (Col. 5, lines 42-52; Item 120 of figure 1), wherein one or more means other than the communication means are activated through communications of one of the fine functional elements received control information from the base station with another of the fine functional elements via the communication means (Col. 19, lines 51-63).

8 As to claim 8, a wireless communication method according to claim 7, further, Johnson et al., does not disclose each of the fine functional elements utilizes, as an energy source for activating one or more means other than the communication means, power generating means possessed by the fine functional element or energy of radio waves or light sent from said base station (Items 310 and 312 of figure 2).

9 As to claim 9, Johnson et al., disclose a wireless communication apparatus comprising a functional element group including a plurality of

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functional elements each having a first function for performing wireless communication by using light or radio waves (Col. 7, lines 32-54), second function different from the wireless communication, wherein the second function of each of the functional elements is a single function (Col. 7, lines 55-67), and said functional element group provides as a whole one or more of the second function through a cooperative work of each of the functional elements using the first function (Col. 8, lines 60-67).

10 As to claim 10, a wireless communication apparatus according to claim 9, further, Johnson et al., disclose the functional element group forms a network system in which the wireless communication among the functional elements is performed by using the first function (Col. 4, lines 1-8).

11 As to claim 11, a wireless communication apparatus according to claim 9, further, Johnson et al., disclose the functional elements provide, as the second functions, sensing functions for measuring different types of physical amounts (Col. 4, lines 9-15).

12 As to claim 12, Johnson et al., disclose a driving method for a wireless communication apparatus, the wireless communication apparatus is used which comprises a functional element group including a plurality of functional elements each having a first function for performing wireless communication by using light or radio waves (Col. 3, lines 42-60; Col. 5, lines 42-52; Col. 7, lines 11-20; Col.

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22, lines 19-21; Items 316 and 318 of figure 2), a second function different from the wireless communication the second function of each of the functional elements is a single function (Col. 4, lines 9-15; Col. 7, lines 55-67), and each of the functional elements is disposed at a desired position to provide as a whole one or more of the second function through a cooperative work of each of the functional elements using the first function (Col. 8, lines 60-67; Col. 19, lines 51-63).

13 As to claim 13, a wireless communication apparatus according to claim 1, further, Johnson et al., disclose a base station is provided for collectively managing the functional elements constituting a functional element group (Col. 5, lines 42-52; Item 120 of figure 1), and the base station controls the functional element group through the wireless communication among the functional elements, or receives data (Col. 5, lines 42-52; Col. 22, lines 19-21).

***Rejections - 35 USC § 103***

14 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15 Claims 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent of Johnson et al., (6,373,399).

16 As to claim 3, a wireless communication apparatus according to claim 1, however, Johnson et al., does not disclose an element for realizing the communication means and an element for realizing one or more means other than the communication means are formed on a single substrate.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the a wireless communication apparatus of Johnson et al., to have the communication means and an element for realizing one or more means other than the communication means are formed on a single substrate, because it is widely known in the communication filed to have different components on a single substrate and one of ordinary skill in the art recognizes



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putting the different components on a single substrate may help cut down on cost and minimize the size of the device.

17 As to claim 4, a wireless communication apparatus according to claim 1, further, Johnson et al., discloses one or more means other than the communication means that include storing and arithmetic processing means (Items 314 and 315 of figure 2), however, Johnson et al., does not disclose an imaging and displaying means.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the a wireless communication apparatus that has storing and arithmetic processing means of Johnson et al., by incorporating the imaging and displaying means, in order to have one the communication means that include imaging means, displaying means, storing means and arithmetic processing means, because Johnson et al., discloses the image and displaying means, as part of the remote network service module (NSM) (Items 214, 215 and 211 of figure 6) and since it is widely known in the communication filed to have different components on a single substrate and one of ordinary skill in the art recognizes putting the different components on a single substrate may help cut down on cost and minimize the size of the device.

18 As to claim 6, a wireless communication apparatus according to claim 1, however, Johnson et al., does not disclose the imaging means comprises a fine sphere lens having a partial flat plane, a parallel flat plate parallel to the partial

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flat plane, and a flat circuit board formed with an imaging element and a communication circuit to be disposed on the partial flat plane.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the a wireless communication apparatus of Johnson et al., by incorporating the imaging means comprises a fine sphere lens having a partial flat plane, a parallel flat plate parallel to the partial flat plane, in order to have the imaging means comprises a fine sphere lens having a partial flat plane, a parallel flat plate parallel to the partial flat plane, and a flat circuit board formed with an imaging element and a communication circuit to be disposed on the partial flat plane, because Johnson et al., discloses a flat circuit board ( See figure 2), an image and displaying means, as part of the remote network service module (NSM) (Items 214, 215 and 211 of figure 6) and it is widely known in the communication filed to have parallel flat plate parallel to flat plane, and a flat circuit board formed with an imaging element and a communication circuit to be disposed on the flat plane to form electronic devices, such as PDA'S and it is also widely known to have different components on a single substrate and one of ordinary skill in the art recognizes putting the different components on a single substrate may help cut down on cost and minimize the size of the device.

### ***Conclusion***

19 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Johnson et al., (US # 5,963,146) discloses a communications network for collecting data from remote data generating stations, and more particularly a radio based system for sending data from a plurality of network service modules, with each network service module attached to a meter, and communicating through remote cell nodes and through intermediate data terminals, to a central data terminal.

Younis et al., (US # 20030063585) discloses a wireless data network and more specifically to managing energy consumption related to data processing and communication in sensor networks.

Campbell et al., (US # 20020068358) Discloses a MicroElectroMechanical System device (a "MEMS device"), which includes microfluidic controls. MEMS devices generally include mechanical microstructures, microsensors, microactuators, and electronics integrated onto a single chip.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sisay Yacob whose telephone number is (571) 272-8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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11/22/2005

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